

REMARKS

By the Amendment, claims 4, 10 and 14-17 have been amended and claims 8 and 13 have been cancelled without prejudice or disclaimer. Support for the instant amendments may be found throughout Applicant's originally filed specification. Applicant submits that no new matter has been introduced. Accordingly, claims 4-7, 9-12 and 14-17 are presently pending, of which claims 4, 14 and 15 are independent.

Reconsideration and the timely allowance of the pending claims, in view of the following remarks, are respectfully requested.

I. Claim Objections

Claims 15 and 16 (on page 4 of the amendment filed on December 14, 2007) were objected to for being misnumbered. Applicant has renumbered these claims as 16 and 17, respectively, as the Examiner indicated. Accordingly, withdrawal of the objection to the claims is earnestly sought.

II. Rejections Under 35 U.S.C. § 112, second paragraph

Claim 17 was rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite due to the improper claim numbering. Applicant has amended claim 17 to resolve its dependency. Accordingly, withdrawal of the rejection of claim 17 under 35 U.S.C. § 112, second paragraph, is earnestly sought.

III. Prior Art Rejections Under 35 U.S.C. § 103

A. Claims 4-7 and 9-12 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,805,708 to Freadman ("Freadman '708") in view of U.S. Patent No. 5,550,921 to Freadman ("Freadman '921"). Applicant traverses this rejection for at least the following reasons.

Applicant submits that the cited portions of Freadman '708 and Freadman '921, either alone or in combination, fail to disclose or render obvious, an electronic apparatus comprising, *inter alia*, "a pair of speaker units, left and right, located in the casing, each of the speaker units including a cabinet, a speaker arranged in the cabinet and exposed to the outside of the cabinet,

and a port which is defined in the cabinet to open the outside of the cabinet and through which a sound emitted from the backside of the speaker into the cabinet is radiated outward from the cabinet and into the casing, *the cabinet of each speaker unit having a top face in contact with an inner surface of an outside wall of the casing and a protrusion which protrudes from the top face and passes through an opening defined in the outside wall of the casing, the speaker being located in the cabinet so as to be exposed to the outside of the casing through the opening of the casing and the protrusion,*” as recited in independent claim 4.

For example, in the speaker system of Freadman ‘708, there is only a single speaker 10¹. [See, e.g., Freadman ‘708; FIG. 2]. Thus, as conceded by the Office Action, “Freadman ‘708 fails to show two speaker units and their sounds are synthesized together.” [Office Action; pg. 3]. Moreover, Freadman ‘708 fails to teach or suggest that the speaker 10 includes a cabinet “... *having a top face in contact with an inner surface of an outside wall of the casing ...*” as recited by claim 4. Indeed, in Freadman ‘708, there is not an independent cabinet for the speaker 10 that is separate from the computer casing 12. Rather, Freadman ‘708 teaches that the speaker 10 is located in the computer casing 12 by supports 30 “at a desired distance from an upper surface of the case ...” [Freadman ‘708, col. 4, lines 33-36].

Moreover, Freadman ‘708 also fails to teach or suggest “the cabinet of [the] speaker unit *having ... a protrusion which protrudes from the top face and passes through an opening defined in the outside wall of the casing, the speaker being located in the cabinet so as to be exposed to the outside of the casing through the opening of the casing* and the protrusion.” [emphasis added]. Indeed, in Freadman ‘708, there is no feature or element which protrudes from a top face of the speaker 10, the sound directing rim 26, or other element therein, that passes through an opening in the outside wall of the computer casing 12. Rather, Freadman ‘708 specifically states “... *the speaker 20 is completely sealed within the case 12.*” [Freadman ‘708; col. 4, lines 54-55, emphasis added]. Thus, in striking contrast to the claimed invention, the sound waves from the front side of the speaker 10 in Freadman ‘708 must travel through port 32, duct 42, and port 22, before being emitted from the computer casing 12. [See, e.g., Freadman ‘708; col. 4, lines 40-43; FIG. 4].

¹ Freadman ‘708 refers to the speaker in its disclosure as corresponding to reference numeral “20” in its figures. However, Applicant submits that there does not appear to be any reference numeral “20” depicted in figures. Rather, it appears that reference numeral “10” is the speaker. Accordingly, Applicant will refer to reference numeral “10” when discussing the speaker of Freadman ‘708.

Further, Applicant submits that Freadman '921 does not overcome the shortcomings of Freadman '708. For example, Freadman '921 discloses a stereo sound source that is connected to a portable computer. [See, e.g., Freadman '921; Abstract]. As such, the speaker units 10 in Freadman '921 will be located completely outside of a computer casing. This, however, is inapposite to the teachings of Freadman '708, which specifically teach that "the use of relatively large independent speakers which must be manually connected to an input port in the laptop or notebook computer is undesirable." [Freadman '708, col. 1, lines 20-28, emphasis added]. Indeed, "... when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious." *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1395 (2007) (citing *United States v. Adams*, 383 U.S. 39, 51-52 (1966)).

Moreover, even assuming, *arguendo*, that Freadman '708 is properly combinable with Freadman '921 (which Applicant does not concede), Freadman '921 fails to teach or suggest "the cabinet of each speaker unit having a top face in contact with an inner surface of an outside wall of the casing and a protrusion which protrudes from the top face and passes through an opening defined in the outside wall of the casing, *the speaker being located in the cabinet so as to be exposed to the outside of the casing through the opening of the casing and the protrusion,*" as recited in claim 4.

One important aspect of Applicant's claimed invention is that when the speaker units are worked, high-, medium-, and low- pitched sounds are emitted from the front side of the speaker outwardly from the casing. On the other hand, low-pitched sounds from the backside of the speakers are emitted from the ports into the casing in phase with the sounds emitted from the front of the speakers. The low-pitched sounds that are emitted from the backside of the speaker units are synthesized together in the casing and the resultant sound vibrates the whole casing and is partially emitted to the outside of the casing through opening and/or various gaps. Thus, the bass range can be enhanced to reproduce rich low-pitched sounds or voices. [See, e.g., Applicant's Specification; page 10, lines 4-20].

Accordingly, Applicant submits that the cited portions of Freadman '708, Freadman '921, or a proper combination thereof, fail to disclose or render obvious each and every feature of independent claim 4. Claims 5-7 and 9-12 depend respectively from claim 4 and therefore, are

patentable for at least the same reasons provided above related to claim 4 and for the additional features recited therein.

With regard to dependent claim 6, the cited portions of Freadman '708 and Freadman '921 make no mention or suggestion that "the speaker units are arranged in the casing with the respective ports thereof opposed to each other." Rather, as discussed above, Freadman '708 teaches only a single speaker unit 10. Moreover, in Freadman '921, the speaker units 10 are attached to the outside surface of the mixer cavity 12 and the bass ports 20 are both located perpendicular to the surface on which they are mounted (i.e., they are parallel to one other) – not opposed to each other. [See Freadman '921, FIG. 2; col. 2, lines 17-18].

Therefore, Applicant respectfully submits that the rejection under 35 U.S.C. § 103(a) of claims 4-7 and 9-12 over Freadman '708 in view of Freadman '921 should be withdrawn and the claims be allowed. Claims 16 and 17 (as amended) depend respectively from claim 4 and therefore, are patentable for at least the same reasons provided above related to claim 4 and for the additional features recited therein.

B. Claims 8, 14 and 15 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Freadman '708 in view of Freadman '921, and in further view of U.S. Patent No.6,744,623 to Numano et al. ("Numano") Applicant traverses this rejection for at least the following reasons.

Applicant submits that the cited portions of Freadman '708, Freadman '921 and Numano, or a proper combination thereof, fail to disclose or render obvious, an electronic apparatus comprising, *inter alia*, "a pair of speaker units, left and right, located in the casing, each of the speaker units including a cabinet, a speaker arranged in the cabinet and exposed to the outside of the cabinet, and a port which is defined in the cabinet to open the outside of the cabinet and through which a sound emitted from the backside of the speaker into the cabinet is radiated outward from the cabinet and into the casing, the speaker having a portion exposed to the outside of the casing through an opening defined in an outside wall of the casing, and the casing having openings through which sounds emitted from the ports of the speaker units into the casing and synthesized together in the casing are radiated to the outside of the casing," as recited in independent claims 14 and 15.

For example, as *conceded* by the Office Action, “Freadman ‘708 fails to show two speaker units and their sounds are synthesized together.” [Office Action; pg. 3]. Moreover, as discussed above, Fredman ‘708 fails to teach or suggest “the speaker having a portion exposed to the outside of the casing through an opening defined in an outside wall of the casing.” Indeed, Fredman ‘708 specifically states “... the speaker 20 is completely sealed within the case 12.” [Fredman ‘708; col. 4, lines 54-55, emphasis added].

Further, Applicant submits that Fredman ‘921 does not overcome the deficiencies of Fredman ‘708. As discussed above, the speaker units 10 in Fredman ‘921 are located completely outside of a computer casing. [See, e.g., Fredman ‘921; Abstract]. This, however, is inapposite to the teachings of Fredman ‘708, which specifically teach that “the use of relatively large independent speakers which must be manually connected to an input port in the laptop or notebook computer is undesirable.” [Fredman ‘708, col. 1, lines 20-28, emphasis added]. Indeed, “... when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious.” *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1395 (2007) (citing *United States v. Adams*, 383 U.S. 39, 51-52 (1966)).

In addition, Applicant submits that Numano does not overcome the deficiencies of Fredman ‘708 and Fredman ‘921. For example, Applicant respectfully submits that under 35 U.S.C. §103(c), Numano which appears to qualify as prior art under 35 U.S.C. §102(e),² *cannot* be used as prior art, because at the time the invention was made, the subject matter of Numano and the present claimed invention were commonly owned by Kabushiki Kaisha Toshiba. [See, 35 U.S.C. §103(c) and MPEP §2146]. Moreover, the inventors of the present application and the Numano application were under an obligation to assign the present application and Numano, respectively, to Kabushiki Kaisha Toshiba. The instant application is assigned to Kabushiki Kaisha Toshiba by way of assignment filed April 1, 2004, and recorded at reel 015173, frame 0739. A copy of the Notices of Recordation for the present application and Numano are enclosed for the Examiner’s information.

² The issue date of Numano is June 1, 2004 which is subsequent to the U.S. filing date of the present application of April 1, 2004. In addition, the publication of the Numano application of June 5, 2003 is subsequent to Applicant’s Japanese Patent application filed May 30, 2003, which Applicant is entitled to the benefit of the filing date thereof. [See 35 U.S.C. § 119(a)-(d)].

Moreover, even assuming *arguendo* that Numano may be relied upon in an obviousness rejection (which Applicant does not concede), Numano fails to teach or render obvious “each of the speaker units including a cabinet, a speaker arranged in the cabinet and exposed to the outside of the cabinet, and a port which is defined in the cabinet to open the outside of the cabinet and through which a sound emitted from the backside of the speaker into the cabinet is radiated outward from the cabinet and into the casing, the speaker having a portion exposed to the outside of the casing through an opening defined in an outside wall of the casing, and the casing having openings through which sounds emitted from the ports of the speaker units into the casing and synthesized together in the casing are radiated to the outside of the casing,” as recited in claims 14 and 15. Indeed, it appears that Numano was merely relied upon by the Office Action to show speakers located at the left and right corners of the top wall of a laptop computer. [See, e.g., Office Action; pg. 5].

Accordingly, Applicant submits that the cited portions of Freadman ‘708, Freadman ‘921, Numano, or a proper combination thereof, fail to disclose or render obvious each and every feature of independent claims 14 and 15. Therefore, Applicant respectfully submits that the rejection under 35 U.S.C. §103(a) of claims 14 and 15 over Freadman ‘708 in view of Freadman ‘921 and in further of Numano should be withdrawn and the claim be allowed.

Claim 8 has been cancelled and therefore the rejection thereof is moot.

IV. Conclusion

All matters having been addressed and in view of the foregoing, Applicant respectfully requests the entry of this Amendment, the Examiner’s reconsideration of this application, and the immediate allowance of all pending claims.

Applicant’s representative remains ready to assist the Examiner in any way to facilitate and expedite the prosecution of this matter. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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Enclosures: Copies of the Notice of Recordation for the present application and Numano.



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Patent #: NONE Issue Dt: Application #: 10814296 Filing Dt: 04/01/2004
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Inventor: Tomofumi Miyamoto

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Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

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